



TFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: Our file: 7557/21  
Applicant: Dimitris N. Metaxas and Anant Madabhushi  
Serial No.: 10/736,455  
Filing Date: 12/15/03  
Title: Method and Apparatus for Automatically Detecting Breast Lesions and Tumors in Images

Examiner:  
Art Unit:

Sir:

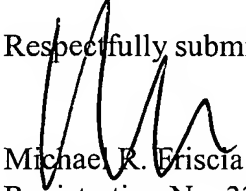
Enclosed for filing in the United States Patent and Trademark Office is the following:

1. Transmittal of Information Disclosure Statement
2. Form PTO-1449
3. Copies of References from Form PTO-1449
4. Transmittal Sheet
5. Postcard Receipt

CONDITIONAL PETITION

If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefore. Please charge any additional charges or any other charges relating to this matter to the deposit account of the writer, **Account No. 06-2143**. A duplicate copy of this letter is enclosed.

Respectfully submitted,

  
Michael R. Friscia  
Registration No. 33,884  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel: (973) 530-2024  
Fax: (973) 530-2224

12/30/04  
Date

enc.

I hereby certify that this correspondence is being deposited with the United States Postal Service, First Class Mail, postage prepaid, to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 12/30/04.

By:   
Janelle Fava

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**

(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.

7557/21

In Re Application Of: Dimitris N. Metaxes and Anant Madabhushi

Application No.

10/736,455

Filing Date

12/15/03

Examiner

Customer No.

20694

Group Art Unit

3762

Confirmation No.

3096

Title: Method and Apparatus for Automatically Detecting Breast Lesions and Tumors in Images

Address to:

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**37 CFR 1.97(b)**

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2. ☐ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

- ☐ the statement specified in 37 CFR 1.97(e);

**OR**

- ☐ the fee set forth in 37 CFR 1.17(p).

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**

(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.

7557/21

In Re Application: **Dimitris N. Metaxos and Anant Madabhushi**

JAN 03 2005

Application No.

10/736,455

Filing Date

12/15/03

Examiner

Customer No.

20694

Group Art Unit

3762

Confirmation No.

3096

Title: **Method and Apparatus for Automatically Detecting Breast Lesions and Tumors in Images****Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- ☐ A check in the amount of \_\_\_\_\_ is attached.
- ☐ The Director is hereby authorized to charge and credit Deposit Account No. \_\_\_\_\_ as described below.
- ☐ Charge the amount of \_\_\_\_\_
- ☐ Credit any overpayment.
- ☐ Charge any additional fee required.
- ☐ Payment by credit card. Form PTO-2038 is attached.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.****Certificate of Transmission by Facsimile\***

I certify that this document and authorization to charge deposit account is being facsimile transmitted to the United States Patent and Trademark Office (Fax. No. \_\_\_\_\_)

(Date)

Signature

Typed or Printed Name of Person Signing Certificate

**Certificate of Mailing by First Class Mail**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on \_\_\_\_\_

(Date)

Signature of Person Mailing Correspondence

Janelle Fava

Typed or Printed Name of Person Mailing Certificate

**\*This certificate may only be used if paying by deposit account.**

Dated: 12/30/04

Signature

Michael R. Friscia

Registration No. 33,884

Wolff &amp; Samson PC

One Boland Drive

West Orange, NJ 07052

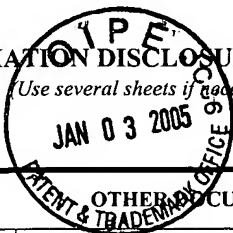
Tel: (973) 530-2024

Fax: (973) 530-2224

cc:

# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)



Docket Number (Optional) 7557/21	Application Number 10/736,455
Applicant(s) Dimitris N. Metaxas and Anant Madabhushi	
Filing Date 12/15/03	Group Art Unit 3762

*EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
1	Arger, et al., "Interreader Variability and Predictive Value of US Descriptions of Solid Breast Masses," Academic Radiology, Vol. 8, No. 4, April 2001, pp. 335-342.
2	Boukerroui, et al., "Segmentation of Ultrasound Images - Multiresolution 2D and 3D Algorithm Based on Global and Local Statistics," Pattern Recognition Letters 24 (2003), pp. 779-790.
3	Chou, et al., "Stepwise Logistic Regression Analysis of Tumor Contour Features for Breast Ultrasound Diagnosis," Ultrasound in Med. & Biol., 2001, Vol. 27, No. 11, pp. 1493-1498.
4	Christopher, et al., "3-D Bayesian Ultra-sound Breast Image Segmentation Using the EM/MPM Algorithm," IEEE International Symposium on Biomedical Imaging, 2002, pp. 601-604.
5	Collaris, et al., "Automatic Detection of Closed Tumor Contours in Medical Ultrasound Images on the Basis of Level-Dependant Spatial Summation," Proceedings of the 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 1997, Vol. 2, pp. 907-908.
6	Drukker et al., "Computerized Detection and Classification of Cancer on Breast Ultrasound," Academic Radiology, Vol. 11, No. 5, May 2004, pp. 526-535.
7	Giger, "Computer-Aided Diagnosis of Breast Lesions in Medical Images," Computing in Medicine, 2000, pp. 39-45.
8	Gulato, et al., "Segmentation of Breast Tumors in Mammograms by Fuzzy Region Growing," Proceedings of the 20th International Conference of the IEEE Engineering in Medicine and Biology Society, 1998, Vol. 20, No. 2, pp. 1002-1005.
9	Herlin, et al., "Stochastic Segmentation of Ultrasound Images," Proceedings of the 11th IAPR International Conference on Pattern Recognition, 1992, pp. 289-292.
10	Horsch, et al., "Automatic Segmentation of Breast Lesions on Ultrasound," Medical Physics, 2001, Vol. 28(8), pp. 1652-1659.
11	Horsch, et al., "Performance of Computer-Aided Diagnosis in the Interpretation of Lesions on Breast Sonography," Academic Radiology, Vol. 11, No. 3, March 2004, pp. 272-280.
12	Muzzolini, et al., "Multiresolution Texture Segmentation With Application to Diagnostic Ultrasound Images," IEEE Transactions on Medical Imaging, Vol. 12, No. 1, 1993, pp. 108-123.

EXAMINER	DATE CONSIDERED
----------	-----------------

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

JAN 03 2005

Docket Number (Optional)

7557/21

Application Number

10/736,455

Applicant(s)

Dimitris N. Metaxas and Anant Madabhushi

Filing Date

12/15/03

Group Art Unit

3762

\*EXAMINER  
INITIAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

13

Ogawa, et al., "Three Dimensional Ultrasonic Imaging for Diagnosis of Breast Tumor," IEEE Ultrasonics Symposium, 1998, Vol. 2, pp. 1677-1680.

14

Ruggiero, et al., "Automatic Recognition of Malignant Lesions in Ultrasound Images by Artificial Neural Networks," Proceedings of 20th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 1998, Vol. 20, No. 2, pp. 872-875.

15

Sivaramakrishnan, et al., "Texture Analysis of Lesions in Breast Ultrasound Images," Computerized Medical Imaging and Graphics, 2002, Vol. 26, pp. 303-307.

16

Xiao, et al., "Segmentation of Ultrasound B-Mode Images With Intensity Inhomogeneity Correction," IEEE Transactions on Medical Imaging, 2002, Vol. 21, No. 1, pp. 48-57.

17

Yoshida, et al., "Segmentation of Liver Tumors in Ultrasound Images Based on Scale-Space Analysis of the Continuous Wavelet Transform," IEEE Ultrasonics Symposium, 1998, Vol. 2, pp. 1713-1716.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.